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| APPLICATION NO. | FI | ILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|------------|------------|----------------------|--------------------------|------------------|
| 10/632,195 | 07/31/2003 | | Chun-Hung Lin | JCLA7907-CA | 9823 |
| 23900 | 7590 | 03/29/2006 | | EXAMINER | |
| J C PATEN | | | PEUGH, BRIAN R | | |
| 4 VENTURE, SUITE 250 IRVINE, CA 92618 | | | | ART UNIT | PAPER NUMBER |
| ŕ | | | • | . 2187 | |
| | | | | DATE MAIL ED: 02/20/2006 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | Application No. | Applicant(s) | | | | |
|--|--|---|--|--|--|--|--|
| | | 10/632,195 | LIN ET AL. | | | | |
| | Office Action Summary | Examiner | Art Unit | | | | |
| · | | Brian R. Peugh | 2187 | | | | |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply | | | | | | | |
| WHIC - Exte after - If NC - Failu Any | ORTENED STATUTORY PERIOD FOR REPLY CHEVER IS LONGER, FROM THE MAILING DANSIONS OF THE MAILING THE MAIL | ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tim vill apply and will expire SIX (6) MONTHS from the cause the application to become ABANDONE | l. ely filed the mailing date of this communication. | | | | |
| Status | | · | | | | | |
| 2a)⊠ | Responsive to communication(s) filed on <u>27 Jac</u> This action is FINAL . 2b) This Since this application is in condition for allower closed in accordance with the practice under E | action is non-final. nce except for formal matters, pro | | | | | |
| Dispositi | on of Claims | | | | | | |
| 5)⊠ 6)⊠ 7)□ 8)□ Applicati 9)□ | Claim(s) 1.4.6-10 and 12-15 is/are pending in to 4a) Of the above claim(s) is/are withdraw Claim(s) 1.4 and 6-8 is/are allowed. Claim(s) 9.10 and 12-15 is/are rejected. Claim(s) is/are objected to. Claim(s) are subject to restriction and/or on Papers The specification is objected to by the Examiner is/are; a) are subject to restrict to a control of the drawing(s) filed on is/are; a) are subjected to by the Examiner is/are; a) are subjected to is/are; a) are subjected to is/are; a) are subjected to is/are; a) are subjected is/are; a) | vn from consideration. r election requirement. | | | | | |
| 10) The drawing(s) filed on is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. | | | | | | | |
| Priority u | nder 35 U.S.C. § 119 | · | | | | | |
| 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. | | | | | | | |
| Attachment | (s) | · | | | | | |
| 1) Notice 2) Notice 3) Inform | e of References Cited (PTO-892) e of Draftsperson's Patent Drawing Review (PTO-948) nation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) No(s)/Mail Date | 4) Interview Summary (Paper No(s)/Mail Dat 5) Notice of Informal Pa 6) Other: | e | | | | |

DETAILED ACTION

Response to Amendment

This Office Action is in response to applicant's communication filed January 27, 2006, in response to PTO Office Action dated November 3, 2005. The applicant's remarks and amendment to the specification and/or claims were considered with the results that follow.

Claims 1, 4, 6-10, and 12-15 have been presented for examination in this application. In response to the last Office Action, claims 1, 6-8 have been amended.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Fandrich et al. (US# 5,519,847).

Regarding claim 9, Fandrich et al. teaches a writing method to a flash memory [Fig. 2, (20)] from a data-access requesting component, wherein the flash memory includes a plurality of storage sectors [memory cells; col. 2, lines 63-64], and a

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writing operation to one sector of the storage sectors needs a plurality of stages handled by an access controller, the writing method comprising [col. 1, lines 56-59]: performing a first writing operation to write a current sector of the storage sectors [col. 6, lines 19-26; Fig. 6, (404); Fig. 8, T1-T2 sequence]; and starting to perform a second writing operation to a next sector of the storage sectors when the first writing operation is not completed yet [col. 6, lines 57-61; Fig. 6, (406); Fig. 8, T2-T3 sequences, upper sequence for 2nd writing op., lower sequence for 1st writing op.]; wherein the second writing operation starts before the first writing operation ends thereby decreasing the time required to perform writing operations and increasing the overall system performance [col. 1, lines 49-67; start of 2nd op. (upper T2-T3 sequence) occurs during writing of 1st op. (450), lower T2-T3 sequence1: wherein the stages includes a first stage for transmitting an information to be written into the access controller [col. 6, lines 19-26], a second stage for finding a sector of the storage sectors in the flash memory to be written [col. 6, lines 57-61] and a third stage for transmitting an information in the access controller into the flash memory [col. 6, lines 62-66] [In Fig. 8, upper sequence 'Load Plane (A or B) & Give Program Command' corresponds to stages 1 & 2; lower sequence 'Program from Plane (A or B)' corresponds to stage 3].

Regarding claim 10, Fandrich et al. teaches starting to perform a third writing operation [Fig. 8, T3-T4 upper sequence] to write a further next sector of the

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storage sectors when the second writing operation is not completed yet [Fig. 8, T3-T4 lower sequence].

Regarding claim 12, Fandrich et al. teaches recurrently performing the foregoing steps if another sector is sill to be written [Fig. 6, step (410); col. 7, lines 35-40].

Regarding claim 13, Fandrich et al. teaches wherein the third stage for the first writing operation is overlapping with the first stage of the second writing operation [In Fig. 8, upper sequence 'Load Plane (A or B) & Give Program Command' corresponds to stages 1 & 2; lower sequence 'Program from Plane (A or B)' corresponds to stage 3].

Regarding claim 14, Fandrich et al. teaches wherein the first stage and the second stage for the same writing operation are overlapping [In Fig. 8, upper sequence 'Load Plane (A or B) & Give Program Command' corresponds to stages 1 & 2].

Regarding claim 15, Fandrich et al. teaches wherein the third stage of the first writing operation, the first stage for the second writing operation, and the second stage for the second writing operation are overlapping [In Fig. 8, upper sequence 'Load Plane (A or B) & Give Program Command' corresponds to stages 1 & 2; lower sequence 'Program from Plane (A or B)' corresponds to stage 3].

Allowable Subject Matter

Claims 1, 4, and 6-8 are allowed over the prior art of record.

Response to Arguments

Applicant's arguments filed January 27, 2006 have been fully considered but they are not persuasive.

Applicant's have argued on pages 8 and 9 of the January 27, 2006 response that the Fandrich et al. reference does not teach all of the claimed subject matter.

Specifically, the Applicant has argued that "the step 404 is not the second stage of the present invention. Moreover, Frandrich didn't teach the overlapping features of the second stage with other stages". The Applicant also indicates that the Fandrich et al. references does not correspond to the figure on page 8 of the response, and thus does not teach the claimed invention. However, the figure of page 8 is one interpretation of the claimed subject matter. Applicant's argument of page 9 has been written in light of the interpretation as found in Applicant's Specification.

First, lines 3-4 of claim 9 recites that the "..writing operation... needs a plurality of stages handled by an access controller, the writing method comprising:", "performing a first writing operation..." (line 5), "starting to perform a second writing operation..." (line 6), and "...wherein the second writing operation starts...". Lines 5-10 of claim 9 recite the operations of the writing method for the writing operation. However, lines 11-14 of claim 9 recite three stages attributed to the plurality of stages recited in the preamble of claim 9 in line 3. However, the preamble recites that "...a plurality of stages" are

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needed for the write operation in line 3, and that line 11 of claim 9 recites that "...the stages *includes*..." (emphasis added). Therefore, in accordance with the claimed subject matter, the stages of claims 11-14 may be all or a portion of the "plurality of stages" as recited in line 3. Thus, the stages of lines 11-14 need not necessarily correspond to the overlapping operations as found in lines 5-10.

Fandrich teaches the overlapping operations as recited in col. 6, lines 19-25, and 57-67, as well as in Figures 6 and 8, as disclosed supra. In conclusion, the Fandrich reference, given a broadest reasonable interpretation, teaches the claimed subject matter of claims 9, 10, and 12-15.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Peugh whose telephone number is (571) 272-4199. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Friday's from 7:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks, can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brian∣R. Pe⊮gh Primary Examiner

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March 24, 2006